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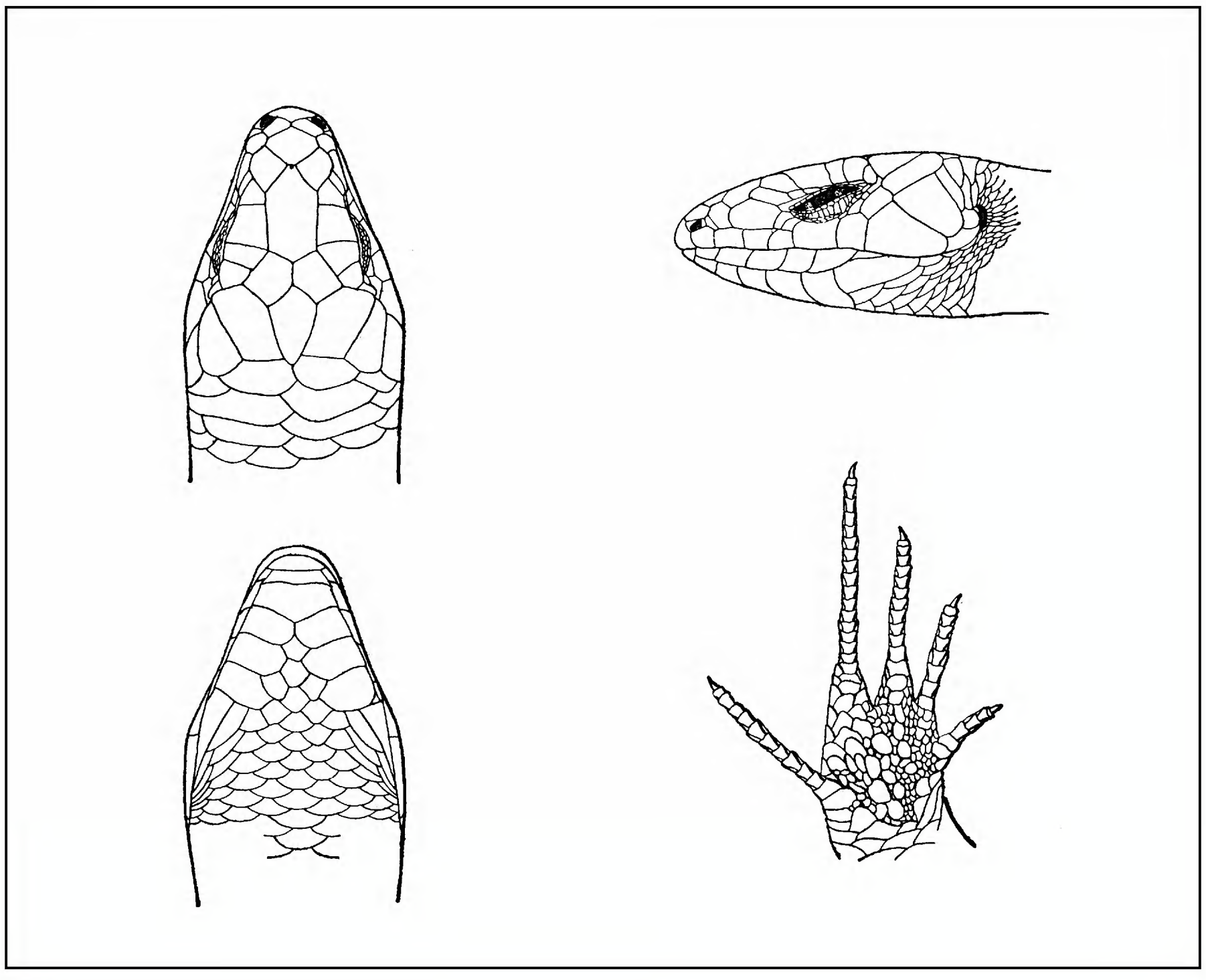

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Preliminary Observations on the Care and Breeding of *Crotaphytus dickersonae* (Iguania: Crotaphytidae)

Scott Patterson
8125 W. Floyd Avenue, # 11-201
Lakewood, CO 80227

Julio Lemos-Espinal
Laboratoria de Ecologia–UBIPRO
Escuela Nacional de Estudios Profesionales Iztacala
Avenida de los Barrios S-N, Los Reyes Iztacala
Estado de México
C.P. 54090
Mexico

Introduction

The Dickerson's collared lizard, *Crotaphytus dickersonae*, is a medium-sized (maximum snout–vent length = 116 mm) saxicolous lizard inhabiting Isla Tiburon in the Gulf of California and the desert mountains of the adjacent Sonoran coastline (Sierra Bacha and Sierra Seri) between Punta de Cirio and Bahia Kino (McGuire, 1996). Farther inland, *C. dickersonae* is replaced by *C. nebrius* (Axtell and Montanucci, 1977; McGuire, 1996).

With increased poaching pressure on this beautiful species, we thought it worthwhile to acquire a few living individuals to initiate a feasibility study of the reproductive husbandry so as to help ensure the continued existence and perhaps proliferation of this species in captivity, at least.

In addition to the authors, expedition members included Jim Winn and Randy Cordero. The collecting trip started on 2 May 1998 and lasted four days. We began collecting in the mountain range just north of Bahia Kino. The first day we collected three males and one female. From 3 May through 6 May, we hunted the Punta Chueca area. Altogether, 17 *C. dickersonae* were collected. Sexual distribution, snout–vent length (SVL), and total length (TL) are summarized in Table 1. The males were found on red igneous rock outcrops, half to three-quarters of the way up the side of the mountain, which is approximately 250 m high. All *C. dickersonae* were found on south- and east-facing slopes. The majority of *C. dickersonae* were found at an elevation of 100–180 m above sea level. Most specimens were found between 1100 h and 1300 h, although one juvenile female (SVL = 65 mm) was collected at 1700 h. On-location specimen body temperatures at time of collection, as well as ambient air and substrate temperature are shown in Table 2. Note the ability of this ectothermic lizard to achieve body temperatures higher than both substrate and ambient.

Of the seven females collected, three displayed gravid coloration. Two females were collected within 10 m of one another; one of these was gravid. Randy Cordero and Jim Winn each kept 1.2 (male:female); the results of captive management are shown in Tables 3 and 4.

Table 1. Sex and size summary of collected *C. dickersonae*.

Sex	Number collected	Snout–vent lengths (mm)	Total lengths (mm)
♂	10	95– 104	286–317
♀	7	84–90	256–265

Housing

Our specimens are kept in a Plexiglas™ terrarium 172 cm × 60 cm × 60 cm with no lid. The substrate is play sand, an average of 4 cm deep. Two spotlights are used along with one UV lamp. There is one rock (20 cm × 10 cm × 10 cm) on the left side of the terrarium under a spotlight. A second rock of similar dimensions is placed in the right side of the cage underneath the other spotlight. Care is taken to ensure the rocks rest on the floor of the cage so as to prevent an excavating lizard from being crushed by an unstable rock. A 35 cm × 18 cm × 12 cm hide box constructed from a cardboard shoebox is placed in the cage. The substrate inside the hide box is Schultz™ vermiculite (medium sized granules). One male and two female *C. dickersonae* are housed in each cage.

Thermal and Light Environment

Ultraviolet (UV) light is provided by a 24 in (60 cm) Zoo Med Reptisun™ 5.0 UVB F2T12REPT bulb placed inside the cage at the bottom. In addition to the UV lamp, two GE™ 100W halogen spotlights for heating are set up at each end of the cage above each rock. Each bulb is 48 cm above the basking surface.

The temperature gradient ranges from 23–30°C in the "cool" part of the enclosure to an ambient air temperature of 45°C at the rock. The photoperiod in the summer is a 15 h light: 9 h dark cycle. In the fall, the cycle is 13 h light: 11 h dark.

Table 2. On-location temperature data: T_b = body temperature; T_a = air temperature; T_s = substrate temperature.

Date	Local time	Sex	Temperature (°C)		
			T_b	T_a	T_s
5/4/98	10:59	♂	33.8	25.2	33.6
	11:05	♂	37.8	26.2	35.6
	15:17	♂	39.8	33.8	35.2
	16:06	♂	37.4	25.8	34.4
5/6/98	09:34	♀	34.8	17.8	22.4
	11:15	♂	36.4	25.6	31.8

Table 3. Clutch size, incubation and hatching success in *C. dickersonae*.

♀ ID	Date laid	Clutch size	Number hatched	Days of incubation										Temperature (°C)
				51	52	53	54	55	56	65	67	68	70	
α1*	7/03/98	5	5			2	1	1	1					28–31
α2*	8/21/98	5	4	1		3								”
β1*	7/05/98	4	4			1	1	1	1					”
β2*	8/23/98	4	3	1	1	1								”
RC1§	6/28/98	7	0											28–30
RC2§	8/25/98	5	0											”
JW1†	5/30/98	3	0											27–30
JW2†	7/18/98	3	3							2	1			”
JW3‡	3/05/00	7	6							2		3	1	29–33

* All α and β clutches were incubated in a vermiculite-to-water ratio of 1.25:1.

§ Randy Cordero clutches (vermiculite-to-water ratio = 1.5:1 and 2:1, respectively).

† Jim Winn clutches (vermiculite-to-water ratio = 1.5:1).

‡ Jim Winn clutch (vermiculite-to-water ratio = 1.2:1 until day 48; on day 48, vermiculite-to-water ratio was changed to 0.85:1; on day 52, vermiculite-to-water ratio was changed to 0.66:1).

Nutrition

At lower elevations in Sonora, we observed *Uta stansburiana*, *Cnemidophorus tigris*, and *Callisaurus draconoides* on hillsides. These three lizard species may be prey species of *C. dickersonae* (McGuire, 1996). Various insects are also consumed. This genus (*Crotaphytus*) has been observed snagging flying insects out of midair (Wells, 1997).

In captivity, the lizards ate grasshoppers (species unknown), moths (species unknown), waxworms (*Galleria mellonella*), “jumboworms” (*Zophobus morio*), and crickets (*Acheta domestica*). None of the lizards would take vegetable greens or anole lizards (*Anolis carolinensis*). Randy Cordero’s adult male ate “pinkie” mice and “fuzzy” mice. Food was dusted daily with Repcal™ vitamin phosphorus-free calcium fortified with vitamin D_3. Keith Ealy (pers. com.) has recently observed a captive-bred male eagerly consume romaine and turnip greens on an ongoing basis. Water was administered weekly through a syringe (1 ml per week). Females were offered water four times per week when gravid. Neonates demonstrated thirst and drank twice a week—as they matured, their apparent thirst diminished.

Adult male *C. dickersonae* were generally more aggressive eaters than the females, except when the females were gravid, at which time they avidly ate all food offered to them.

Neonates started eating 1 cm baby crickets on the third day after hatching. Small to medium crickets (1.5–2 cm) were proffered after three weeks, and adult crickets and jumboworms after eight weeks. Placement of food insects within the terrarium confines led to food fights, with neonates fighting over the same insect. This behavior was not noticed in juveniles or adults.

Courtship and Mating

In a captive environment, rapid head bobbing was observed in the males. Copulation was initiated by the male biting the receptive female on the nape of her neck and mounting her. The male, using his tail, would flip the female’s tail up and copulation would ensue. Upon intromission, the female would rapidly shake her head laterally; this quivering motion lasted throughout the 20–40 second duration of coitus. The male would then release his hold on the female’s neck and the pair would decouple. The male was observed mating only once per day for a period of six days. He mated with each female several times between egg-laying episodes. Keith Ealy (pers. com.) has since observed on one occasion captive-bred individuals copulating twice a day.

When non-receptive, the female would flatten her body, distend her throat and lift her tail. At other times a nonreceptive female, upon the appearance of the male would raise her body stilt-like on fully extended legs. Nonreceptive behavior was also communicated by a single push-up using her front legs only. If the male persisted, the female was observed on occasion trying to jump on top of the male.

Nesting Behavior and Oviposition

The aforementioned hide box served as a nest box, with vermiculite 8–10 cm deep. It was dampened using a spray bottle once a week. As gravid females approached full term, the substrate was dampened daily. Females were observed digging inside the nest box and throughout the cage 15 days prior to egg laying. During the egg-laying, females were offered 2 ml of water which was readily accepted. The eggs were buried in the nestbox and the egg-laying female would then attempt to bury the entire nest box with the surrounding substrate. The alpha female and the beta female laid their

Table 4. Neonate measurements and growth of *C. dickersonae*.

♀ ID	Number of neonates (males.females)	Hatch date: mm/yy	Snout–vent length in mm range ($\bar{x}$)			Total length in mm range ($\bar{x}$)		
			At hatching	At 7 weeks	At 14 weeks	At hatching	At 7 weeks	At 14 weeks
α1, β1	9 (7.2)	08/98	30– 38 (35.5)	48– 54 (51)	58– 73 (65.5)	82– 91 (87.5)	115– 172 (143.5)	171– 229 (200)
α2, β2	7 (3.4)	10/98	31– 38 (34.7)	45– 60 (52.5)	—	86– 88 (86.5)	138– 180 (159)	—
JW2	3 (0.3)	07/98	29– 31 (30.2)	51– 52 (51.5)	68– 70 (69)	86– 88 (86.4)	142– 148 (145)	200– 203 (201.5)
JW3	6	05/00	—	—	—	92– 102 (97)	—	—

second clutches of eggs exactly 49 days after their first clutches. Once laid, the eggs were placed in a 20 cm × 12 cm × 6 cm Rubbermaid™ container with a plastic baggy over it. Water was sprayed in the bottom of the baggy for humidity. The container was then placed in a 46 cm × 46 cm × 18 cm Styrofoam poultry incubator.

Egg Incubation

Once the eggs were transferred from the nesting box to the Rubbermaid container in the incubator, we were very careful not to disturb the position of each egg. The plastic baggy was opened once in the morning and once in the evening. After 15 days, one small hole (0.5 cm) was placed in the baggy. At 30 days, a second hole was punched in the baggy. Incubation time, temperatures and vermiculite-to-water ratios are shown in Table 3.

Jim Winn's last clutch of seven eggs (see JW3) was initially placed in a vermiculite-to-water ratio shown in Table 3. On day 42 of incubation, one egg began to collapse. By day 48, five of the six remaining viable eggs were collapsed and some were wrinkled over the entire exposed portion. Jim added more water to the vermiculite. By day 52, one egg had become completely turgid, and the others no longer appeared to be desiccated, although they did not achieve the fullness of the initial egg. On day 52, and for a final time, more water was added to the vermiculite, the ratios of which are shown in Table 3. The two eggs that were the most collapsed hatched first. The last egg to hatch was the one that remained fully turgid throughout the incubation period. According to Jim Winn (pers. com.), most of the eggs had been collapsed over 25 days and yet still hatched. In the past, Jim has seen eggs collapse a week or so before hatching, but never observed egg collapse this early in the incubation period and still had a successful hatch. He was sufficiently convinced of the non-viability of three of the eggs, that he segregated them in a separate container from the apparently viable eggs. Fortunately all six eggs hatched and produced robust and active neonates.

Hatchling Size

Neonate measurements and growth of *C. dickersonae* are shown in Table 4. The growth rates of male and female neonates were similar for the first seven weeks. During weeks 8–14, we noticed that male neonate growth rate surpassed female growth rate.

Color Pattern Variation

Male *C. dickersonae* displayed a dorsal color ranging from aquamarine to cobalt blue with white spots of various shapes and sizes but generally "large" compared with other *Crotaphytus* species. Two black bands form the collar. The gular area is gray. The tail is somewhat compressed laterally, but not to the extent found in *C. vestigium* (Montanucci et al., 1975; Fig. 1).

Males from the mountains near Punta Chueca had black dorsal pigments concentrated to form a "third" collar. Some males from the Bahia Kino area also had some yellow coloration on the posterior side of their thighs that the Punta Chueca males lacked.

The head is pale gray, turning a dark blue hue as the male thermoregulates. The dorsal surface of the legs is blue with light and dark spots on the thighs. The inguinal patches are black.

Female *C. dickersonae* show tan dorsal coloring except when gravid, during which time they have a silver-gray hue. The female may have black pigmentation forming traces of a "third" collar. The dorsum shows a generous sprinkling of white dots. The tail is butterscotch yellow. When gravid, females show a generous splashing of orange-red transverse bars and dashes from the neck to just anterior to the hind limbs.

Neonates are silver with orange and black bands. Neonates begin assuming adult coloration between eight and ten weeks of age. The juvenile males retain the bright orange bands, whereas the females' orange bands fade. The males eventually lose the orange coloring as their dorsum gradually turns to green and then blue.

Dormancy

Food was withheld for one week beginning 1 December, during which time full lighting remained. On 8 December, the lights were turned off. On 15 December, the lizards were placed in their hibernacula, which are terraria 32 cm × 34 cm × 76 cm. Hibernation occurred from 15 December to 1 March at 18–21°C.

Acknowledgments

We thank Richard R. Montanucci for his guidance with this onging project, and Jim Winn and Randy Cordero for their field assistance and contributions to this paper. We would also like to express our gratitude to G. Keith Ealy Jr., who prepared the manuscript. We are very grateful to the Colorado Herpetological Society for financial support of this research project.

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[Editor's note: Dallas Lore Sharp (1870-1929) was a professor of English at Boston University and a lover of nature. Two more herp-related essays by Professor Sharp can be found in the recently released *Nature's Fading Chorus: Classic and Contemporary Writings on Amphibians*, edited by Gordon L. Miller, Island Press (2000). MAD]

Turtle Eggs for Agassiz

Dallas Lore Sharp

It is one of the wonders of the world that so few books are written. With every human being a possible book, and with many a human being capable of becoming more books than the world could contain, is it not amazing that the books of men are so few? And so stupid!

I took down, recently, from the shelves of a great public library, the four volumes of Agassiz's *Contributions to the Natural History of the United States.*[1] I doubt if anybody but the char-woman, with her duster, had touched those volumes for twenty-five years. They are an excessively learned, a monumental, an epoch-making work, the fruit of vast and heroic labors, with colored plates on stone, showing the turtles of the United States, and their embryology. The work was published more than half a century ago (by subscription); but it looked old beyond its years—massive, heavy, weathered, as if dug from the rocks. It was difficult to feel that Agassiz could have written it—could have built it, grown it, for the laminated pile had required for its growth the patience and painstaking care of a process of nature, as if it were a kind of printed coral reef. Agassiz do this? The big, human, magnetic man at work upon these pages of capital letters, Roman figures, brackets, and parentheses in explanation of the pages of diagrams and plates! I turned away with a sigh from the weary learning, to read the preface.

When a great man writes a great book he usually flings a preface after it, and thereby saves it, sometimes, from oblivion. Whether so or not, the best things in most books are their prefaces. It was not, however, the quality of the preface to these great volumes that interested me, but rather the wicked waste of durable book material that went to its making. Reading down through the catalogue of human names and of thanks for help received, I came to a sentence beginning: "In New England I have myself collected largely; but I have also received valuable contributions from the late Rev. Zadoc Thompson of Burlington . . . from Mr. D. Henry Thoreau of Concord . . . and from Mr. J. W. P. Jenks of Middleboro'." And then it hastens on with the thanks in order to get to the turtles, as if turtles were the one and only thing of real importance in all the world.

Turtles no doubt are important, extremely important,

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1. Louis Agassiz (1807-1873), professor at Harvard College and founder of the Museum of Comparative Zoology, was the author of *Contributions to the Natural History of the United States of America.* Envisioned as a ten-volume series, only Volumes 1-4 (published 1857-1862) of *Contributions* were completed in Agassiz's lifetime, and Volume 5 appeared posthumously in 1877. The last half of Volume 1 and all of Volume 2 were devoted to North American turtles, including their classification, anatomy, embryonic development, physiology, distribution, and habits. (Reference: Adler, K. 1989. Herpetologists of the Past, Pp. 5-141, *In* K. Adler (ed.), Contributions to the History of Herpetology. SSAR Contributions to Herpetology No. 5.).

embryologically, as part of our genealogical tree; but they are away down among the roots of the tree as compared with the late Rev. Zadoc Thompson of Burlington. I happen to know nothing about the Rev. Zadoc, but to me he looks very interesting. Indeed any reverend gentleman of his name and day who would catch turtles for Agassiz must have been interesting. And as for Henry Thoreau, we know he was interesting. The rarest wood turtle in the United States was not so rare a specimen as this gentleman of Walden Woods and Concord. We are glad even for this line in the preface about him; glad to know that he tried, in this untranscendental way, to serve his day and generation. If Agassiz had only put a chapter in his book about it! But this is the material he wasted, this and more of the same human sort, for the Mr. Jenks of Middleboro' (at the end of the quotation) was, years later, an old college professor of mine, who told me some of the particulars of his turtle contributions, particulars which Agassiz should have found a place for in his big book. The preface says merely that this gentleman sent turtles to Cambridge by the thousands—brief and scanty recognition. For that is not the only thing this gentleman did. On one occasion he sent, not turtles, but turtle *eggs* to Cambridge—*brought* them, I should say; and all there is to show for it, so far as I could discover, is a sectional drawing of a bit of the mesoblastic layer of one of the eggs!

Of course, Agassiz wanted to make that mesoblastic drawing, or some other equally important drawing, and had to have the fresh turtle egg to draw it from. He had to have it, and he got it. A great man, when he wants a certain turtle egg, at a certain time, always gets it, for he gets someone else to get it. I am glad he got it. But what makes me sad and impatient is that he did not think it worth while to tell about the getting of it, and so made merely a learned turtle book of what might have been an exceedingly interesting human book.

It would seem, naturally, that there could be nothing unusual or interesting about the getting of turtle eggs when you want them. Nothing at all, if you should chance to want the eggs as you chance to find them. So with anything else—good copper stock, for instance, if you should chance to want it, and should chance to be along when they chance to be giving it away. But if you want copper stock, say of C & H quality, *when* you want it, and are bound to have it, then you must command more than a college professor's salary. And likewise, precisely, when it is turtle eggs that you are bound to have.

Agassiz wanted those turtle eggs when he wanted them—not a minute over three hours from the minute they were laid. Yet even that does not seem exacting, hardly more difficult than the getting of hen eggs only three hours old. Just so, provided the professor could have had his private turtle coop in Harvard Yard; and provided he could have made his turtles lay. But turtles will not respond, like hens, to meat scraps and the warm mash. The professor's problem was not to get from a mud turtle's nest in the back yard to the table in the laboratory; but to get from the laboratory in Cambridge to some pond when the turtles were laying, and back to the laboratory within the limited time. And this, in the days of Darius Green, might have called for nice and discriminating work—as it did.

Agassiz had been engaged for a long time upon his *Contributions*. He had brought the great work nearly to a finish. It was, indeed, finished but for one small yet very important bit of observation: he had carried the turtle egg through every stage of its development with the single exception of one—the very earliest—that stage of first cleavages, when the cell begins to segment, immediately upon its being laid. That beginning stage had brought the *Contributions* to a halt. To get eggs that were fresh enough to show the incubation at this period had been impossible.

There were several ways that Agassiz might have proceeded: he might have got leave of absence for the spring term, taken his laboratory to some pond inhabited by turtles, and there camped until he should catch the reptile digging out her nest. But there were difficulties in all of that—as those who are college professors and naturalists know. As this was quite out of the question, he did the easiest thing—asked Mr. Jenks of Middleboro' to get him the eggs. Mr. Jenks got them. Agassiz knew all about his getting of them; and I say the strange and irritating thing is that Agassiz did not think it worth while to tell us about it, at least in the preface to his monumental work.[2]

It was many years later that Mr. Jenks, then a gray-haired college professor, told me how he got those eggs to Agassiz.

"I was principal of an academy, during my younger years," he began, "and was busy one day with my classes, when a large man suddenly filled the doorway of the room, smiled to the four corners of the room, and called out with a big, quick voice that he was Professor Agassiz.

"Of course he was. I knew it, even before he had had time to shout it to me across the room.

"Would I get him some turtle eggs? he called. Yes, I would. And would I get them to Cambridge within three hours from the time they were laid? Yes, I would. And I did. And it was worth the doing. But I did it only once.

"When I promised Agassiz those eggs I knew where I was going to get them. I had got turtle eggs there before – at a particular patch of sandy shore along a pond, a few miles distant from the academy.

"Three hours was the limit. From the railroad station to Boston was thirty-five miles; from the pond to the station was perhaps three or four miles; from Boston to Cambridge we called about three miles. Forty miles in round numbers! We figured it all out before he returned, and got the trip down to two hours—record time: driving from the pond to the station; from the station by express train to Boston; from Boston by cab to Cambridge. This left an easy hour for accidents and

2. "Agassiz makes scant reference to Jenks in his book. In Volume 1 [of the *Contributions*], page xv, he says ' . . . to Mr. Jenks I am indebted for most of the eggs the development of which I have been able to trace. For a number of years he has provided me annually with many hundreds of eggs, of all our common species.'" (Dr. Kraig Adler, pers. com. to J. N. Stuart)

delays.

"Cab and car and carriage we reckoned into our time-table; but what we didn't figure on was the turtle." And he paused abruptly.

"Young man," he went on, his shaggy brows and spectacles hardly hiding the twinkle in the eyes that were bent severely upon me, "young man, when *you* go after turtle eggs, take into account the turtle. No! no! That's bad advice. Youth never reckons on the turtle—and youth seldom ought to. Only old age does that; and old age would never have got those turtle eggs to Agassiz.

"It was in the early spring that Agassiz came to the academy, long before there was any likelihood of the turtles laying. But I was eager for the quest, and so fearful of failure that I started out to watch at the pond fully two weeks ahead of the time that the turtles might be expected to lay. I remember the date clearly: it was May fourteenth.

"A little before—along near three o'clock—I would drive over to the pond, hitch my horse near by, settle myself quietly among some thick cedars close to the sandy shore, and there I would wait, my kettle of sand ready, my eye covering the whole sleeping pond. Here among the cedars I would eat my breakfast, and then get back in good season to open the academy for the morning session.

"And so the watch began.

"I soon came to know individually the dozen or more turtles that kept to my side of the pond. Shortly after the cold mist would lift and melt away they would stick up their heads through the quiet water; and as the sun slanted down over the ragged rim of tree tops the slow things would float into the warm, lighted spots, or crawl out and doze comfortably on the hummocks and snags.

"What fragrant mornings those were! How fresh and new and unbreathed! The pond odors, the woods odors, the odors of the ploughed fields—of water lily, and wild grape, and the dew-laid soil! I can taste them yet, and hear them yet—the still, large sounds of the waking day—the pickerel breaking the quiet with his swirl; the kingfisher dropping anchor; the stir of feet and wings among the trees. And then the thought of the great book being held up for me! Those were rare mornings!

"But there began to be a good many of them, for the turtles showed no desire to lay. They sprawled in the sun, and never one came out upon the sand as if she intended to help on the great professor's book. The embryology of her eggs was of small concern to her; her contribution to the Natural History of the United States could wait.

"And it did wait. I began my watch on the fourteenth of May; June first found me still among the cedars, still waiting, as I had waited every morning, Sundays and rainy days alike. June first was a perfect morning, but every turtle slid out upon her log, as if egg laying might be a matter strictly of next year.

"I began to grow uneasy—not impatient yet, for a naturalist learns his lesson of patience early, and for all his years; but I began to fear lest, by some subtile sense, my presence might somehow be known to the creatures; that they might have gone to some other place to lay, while I was away at the schoolroom.

"I watched on to the end of the first week, on to the end of the second week in June, seeing the mists rise and vanish every morning, and along with them vanish, more and more, the poetry of my early morning vigil. Poetry and rheumatism cannot long dwell together in the same clump of cedars, and I had begun to feel the rheumatism. A month of morning mists wrapping me around had at last soaked through to my bones. But Agassiz was waiting, and the world was waiting, for those turtle eggs; and I would wait. It was all I could do, for there is no use bringing a china nest egg to a turtle; she is not open to any such delicate suggestion.

"Then came a mid-June Sunday morning, with dawn breaking a little after three: a warm, wide-awake dawn, with the level mist lifted from the level surface of the pond a full hour higher than I had seen it any morning before.

"This was the day: I knew it. I have heard persons say that they can hear the grass grow; that they know by some extra sense when danger is nigh. That we have these extra senses I fully believe, and I believe they can be sharpened by cultivation. For a month I had been watching, brooding over this pond, and now I knew. I felt a stirring of the pulse of things that the coldhearted turtles could no more escape than could the clods and I.

"Leaving my horse unhitched, as if he too understood, I slipped eagerly into my covert for a look at the pond. As I did so, a large pickerel ploughed a furrow out through the spatterdocks, and in his wake rose the head of an enormous turtle. Swinging slowly around, the creature headed straight for the shore, and without a pause scrambled out on the sand.[3]

"She was about the size of a big scoop shovel; but that was not what excited me, so much as her manner, and the gait at which she moved; for there was method in it, and fixed purpose. On she came, shuffling over the sand toward the higher open fields, with a hurried, determined seesaw that was taking her somewhere in particular, and that was bound to get her there on time.

"I held my breath. Had she been a dinosaurian making Mesozoic footprints, I could not have been more fearful. For footprints in the Mesozoic mud, or in the sands of time, were as nothing to me when compared with fresh turtle eggs in the sands of this pond.

"But over the strip of sand, without a stop, she paddled, and up a narrow cow path into the high grass along a fence.

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3. The species of turtle is not identified in Sharp's story or in Agassiz's *Contributions*. However, given the description of the animal's size ("enormous") and the locality (eastern Massachusetts), it was almost certainly a snapping turtle, known then, as now, as *Chelydra serpentina* (Dr. Kraig Adler, pers. com. to J. N. Stuart).

Then up the narrow cow path, on all fours, just like another turtle, I paddled, and into the high grass along the fence.

"I kept well within sound of her, for she moved recklessly, leaving a trail of flattened grass a foot and a half wide. I wanted to stand up, — and I don't believe I could have turned her back with a rail, — but I was afraid if she saw me that she might return indefinitely to the pond; so on I went, flat to the ground, squeezing through the lower rails of the fence, as if the field beyond were a melon patch. It was nothing of the kind, only a wild, uncomfortable pasture, full of dewberry vines, and very discouraging. They were excessively wet vines and briery. I pulled my coat sleeves as far over my fists as I could get them, and, with the tin pail of sand swinging from between my teeth to avoid noise, I stumped fiercely, but silently, on after the turtle.

"She was laying her course, I thought, straight down the length of this dreadful pasture, when, not far from the fence, she suddenly hove to, warped herself short about, and came back, barely clearing me, at a clip that was thrilling. I warped about, too, and in her wake bore across the corner of the pasture, across the powdery public road, and on to a fence along a field of young corn.

"I was somewhat wet by this time, but not so wet as I had been before, wallowing through the deep dry dust of the road. Hurrying up behind a large tree by the fence, I peered down the corn rows and saw the turtle stop, and begin to paw about in the loose soft soil. She was going to lay!

"I held on to the tree and watched, as she tried this place, and that place, and the other place — the eternally feminine! But *the* place, evidently, was hard to find. What could a female turtle do with a whole field of possible nests to choose from? Then at last she found it, and, whirling about, she backed quickly at it, and, tail first, began to bury herself before my staring eyes.

"Those were not the supreme moments of my life; perhaps those moments came later that day; but those certainly were among the slowest, most dreadfully mixed of moments that I ever experienced. They were hours long. There she was, her shell just showing, like some old hulk in the sand alongshore. And how long would she stay? And how should I know if she had laid an egg?

"I could still wait. And so I waited, when, over freshly awakened fields, floated four mellow strokes from the distant town clock.

"Four o'clock! Why, there was no train until seven! No train for three hours! The eggs would spoil! Then with a rush it came over me that this was Sunday morning, and there was no regular seven o'clock train — none till after nine.

"I think I should have fainted had not the turtle just then begun crawling off. I was weak and dizzy; but there, there in the sand, were the eggs! And Agassiz! And the great book! And I cleared the fence, and the forty miles that lay between me and Cambridge, at a single jump. He should have them, trains or no. Those eggs should go to Agassiz by seven o' clock, if I had to gallop every mile of the way. Forty miles! Any horse could cover it in three hours, if he had to; and, upsetting the astonished turtle, I scooped out her round white eggs.

"On a bed of sand in the bottom of the pail I laid them, with what care my trembling fingers allowed; filled in between them with more sand; so with another layer to the rim; and, covering all smoothly with more sand, I ran back for my horse.

"That horse knew, as well as I, that the turtles had laid, and that he was to get those eggs to Agassiz. He turned out of that field into the road on two wheels, a thing he had not done for twenty years, doubling me up before the dashboard, the pail of eggs miraculously lodged between my knees.

"I let him out. If only he could keep this pace all the way to Cambridge! Or even halfway up there; and I should have time to finish the trip on foot. I shouted him on, holding to the dasher with one hand, the pail of eggs with the other, not daring to get off my knees, though the bang on them, as we pounded down the wood road, was terrific. But nothing must happen to the eggs; they must not be jarred, or even turned over in the sand before they came to Agassiz.

"In order to get on the pike it was necessary to drive back away from Boston toward the town. We had nearly covered the distance, and were rounding a turn from the woods into the open fields, when, ahead of me, at the station it seemed, I heard the quick sharp whistle of a locomotive.

"What did it mean? Then followed the *puff, puff, puff* of a starting train. But what train? Which way going? And jumping to my feet for a longer view, I pulled into a side road that paralleled the track, and headed hard for the station.

"We reeled along. The station was still out of sight, but from behind the bushes that shut it from view rose the smoke of a moving engine. It was perhaps a mile away, but we were approaching, head-on, and topping a little hill, I swept down upon a freight train, the black smoke pouring from the stack, as the mighty creature pulled itself together for its swift run down the rails.

"My horse was on the gallop, going with the track, and straight toward the coming train. The sight of it almost maddened me — the bare thought of it, on the road to Boston! On I went; on it came, a half — a quarter of a mile between us, when suddenly my road shot out along an unfenced field with only a level stretch of sod between me and the engine.

"With a pull that lifted the horse from his feet, I swung him into the field and sent him straight as an arrow for the track. That train should carry me and my eggs to Boston!

"The engineer pulled the rope. He saw me standing up in the rig, saw my hat blow off, saw me wave my arms, saw the tin pail swing in my teeth, and he jerked out a succession of sharp halts! But it was he who should halt, not I; and on we went, the horse with a flounder landing the carriage on top of the track.

"The train was already grinding to a stop; but before it was near a stand still I had backed off the track; jumped out, and,

running down the rails, with the astonished engineers gaping at me, had swung aboard the cab.

"They offered no resistance; they hadn't had time. Nor did they have the disposition, for I looked strange, not to say dangerous. Hatless, dew-soaked, smeared with yellow mud, and holding, as if it were a baby or a bomb, a little tin pail of sand.

" 'Crazy,' the fireman muttered, looking to the engineer for his cue.

"I had been crazy, perhaps, but I was not crazy now.

" `Throw her wide open,' I commanded. `Wide open! These are fresh turtle eggs for Professor Agassiz of Cambridge. He must have them before breakfast.'

"Then they knew I was crazy, and evidently thinking it best to humor me, threw the throttle wide open, and away we went.

"I kissed my hand to the horse, grazing unconcernedly in the open field, and gave a smile to my crew. That was all I could give them, and hold myself and the eggs together. But the smile was enough. And they smiled through their smut at me, though one of them held fast to his shovel, while the other kept his hand upon a big ugly wrench. Neither of them spoke to me, but above the roar of the engine I caught enough of their broken talk to understand that they were driving under a full head of steam, with the intention of handing me over to the Boston police, as perhaps the easiest way of disposing of me.

"I was only afraid that they would try it at the next station. But that station whizzed past without a bit of slack, and the next, and the next; when it came over me that this was the through freight, which should have passed in the night, and was making up for lost time.

"Only the fear of the shovel and the wrench kept me from shaking hands with both men at this discovery. But I beamed at them; and they at me. I was enjoying it. The unwonted jar beneath my feet was wrinkling my diaphragm with spasms of delight. And the fireman beamed at the engineer, with a look that said, 'See the lunatic grin; he likes it!'

"He did like it. How the iron wheels sang to me as they took the rails! How the rushing in my ears sang to me! From my stand on the fireman's side of the cab I could catch a glimpse of the track just ahead of the engine, where the ties seemed to leap into the throat of the mile-devouring monster. The joy of it! Of seeing space swallowed by the mile!

"I shifted the eggs from hand to hand and thought of my horse, of Agassiz, of the great book, of my great luck, — luck, — luck, — until the multitudinous tongues of the thundering train were all chiming `luck! luck! luck!' They knew! They understood! This beast of fire and tireless wheels was doing its best to get the eggs to Agassiz!

"We swung out past the Blue Hills, and yonder flashed the morning sun from the towering dome of the State House. I might have leaped from the cab and run the rest of the way on foot, had I not caught the eye of the engineer watching me narrowly. I was not in Boston yet, nor in Cambridge either. I was an escaped lunatic, who had held up a train, and forced it to carry me to Boston.

"Perhaps I had overdone the lunacy business. Suppose these two men should take it into their heads to turn me over to the police, whether I would or no? I could never explain the case in time to get the eggs to Agassiz. I looked at my watch. There were still a few minutes left, in which I might explain to these men, who, all at once, had become my captors. But it was too late. Nothing could avail against my actions, my appearance, and my little pail of sand.

"I had not thought of my appearance before. Here I was face and clothes caked with yellow mud, my hair wild and matted, my hat gone, and in my full-grown hands a tiny tin pail of sand, as if I had been digging all night with a tiny tin shovel on the shore! And thus to appear in the decent streets of Boston on a Sunday morning.

"I began to feel like a hunted criminal. The situation was serious, or might be, and rather desperately funny at its best. I must in some way have shown my new fears, for both men watched me more sharply.

"Suddenly, as we were nearing the outer freight yard, the train slowed down and came to a stop. I was ready to jump, but I had no chance. They had nothing to do, apparently, but to guard me. I looked at my watch again. What time we had made! It was only six o'clock, with a whole hour to get to Cambridge.

"But I didn't like this delay. Five minutes — ten — went by.

" `Gentlemen,' I began, but was cut short by an express train coming past. We were moving again, on — into a siding; on — on to the main track; and on with a bump and a crash and a succession of crashes, running the length of the train on at a turtle's pace, but on, when the fireman, quickly jumping for the bell rope, left the way to the step free, and — the chance had come!

"I never touched the step, but landed in the soft sand at the side of track, and made a line for the yard fence.

"There was no hue or cry. I glanced over my shoulder to see if they were after me. Evidently their hands were full, and they didn't know I had gone.

"But I had gone; and was ready to drop over the high board fence, when it occurred to me that I might drop into a policeman's arms. Hanging my pail in a splint on top of a post, I peered cautiously over — a very wise thing to do before you jump a high board fence. There, crossing the open square toward the station, was a big, burly fellow with a club — looking for me.

"I flattened for a moment, when someone in the yard yelled at me. I preferred the policeman, and, grabbing my pail, I slid over to the street. The policeman moved on past the corner of the station out of sight. The square was free, and yonder stood a cab!

"Time was flying now. Here was the last lap. The cabman saw me coming, and squared away. I waved a paper dollar at

him, but he only stared the more. A dollar can cover a good deal, but I was too much for one dollar. I pulled out another, thrust them both at him, and dodged into the cab, calling, `Cambridge!'

"He would have taken me straight to the police station had I not said `Harvard College. Professor Agassiz's house! I've got eggs for Agassiz'; and pushed dollar up at him through the hole.

"It was nearly half past six.

" `Let him go!' I ordered. `Here's another dollar if you make Agassiz's house in twenty minutes. Let him out; never mind the police.'

"He evidently knew the police, or there were few around at that time on a Sunday morning. We went down the sleeping streets, as I had gone down the wood roads from the pond two hours before, but with the rattle and crash now of a fire brigade. Whirling a corner into Cambridge Street, we took the bridge at gallop, the driver shouting out something in Hibernian to a pair of waving arms and a belt of brass buttons.

"Across the bridge with a rattle and jolt that put the eggs in jeopardy, and on over the cobblestones, we went. Half-standing, to lessen the jar, I held the pail in one hand and myself in the other, not daring to let go even to look at my watch.

"But I was afraid to look at the watch. I was afraid to see how near to seven o'clock it might be. The sweat was dropping from my nose, so close was it running to the limit of my time.

"Suddenly there was a lurch, and I dived forward, ramming my head into the front of the cab, coming up with a rebound that landed me across the small of my back on the seat, and sent half of my pail of eggs helter-skelter over the floor.

"We had stopped. Here was Agassiz's house; and without taking time to pick up the scattered eggs I tumbled out, and pounded on the door.

"No one was astir in the house. But I would stir them. And I did. Right in the midst of the racket the door opened. It was the maid.

" `Agassiz,' I gasped, `I want Professor Agassiz, quick!' And I pushed by her into the hall.

" `Go 'way, sir. I'll call the police. Professor Agassiz is in bed. Go 'way, sir!'

" `Call him — Agassiz — instantly, or I'll call him myself.'

"But I didn't; for just then a door overhead was flung open, a great white-robed figure appeared on the dim landing above, and a quick loud voice called excitedly:

" `Let him in! Let him in! I know him. He has my turtle eggs!'

"And the apparition, slipperless, and clad in anything but an academic gown, came sailing down the stairs.

"The maid fled. The great man, his arms extended, laid hold of me with both hands, and, dragging me and my precious pail into his study, with a swift, clean stroke laid open one of the eggs, as the watch in my trembling hands ticked its way to seven — as if nothing unusual were happening to the history of the world."

"You were in time, then?" I said.

"To the tick. There stands my copy of the great book. I am proud of the humble part I had in it." [4]

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4. The heroic efforts of Professor Jenks notwithstanding, there is some doubt that the eggs discussed in Sharp's story were actually used by Agassiz in his illustration of early embryonic development (Mehdi Ouni, pers. com. to J. N. Stuart). But that is another story worth telling . . .

Bull. Chicago Herp. Soc. 35(9):210-211, 2000

Book Review: *A Monograph of the Colubrid Snakes of the Genus* Elaphe *Fitzinger* by Klaus-Dieter Schulz with contributions by André Entzeroth. 1996. Koeltz Scientific Books. 439 pp., 420 color photographs, 48 distribution maps, 121 black-and-white line drawings. Hardbound. ISBN 80-901699-8-8. $150.00.

James B. Murphy
Department of Herpetology
National Zoological Park
Smithsonian Institution
3001 Connecticut Avenue, NW
Washington, DC 20008

If you are an amateur herpetoculturist, how do you know how to build a herpetocultural library? It seems that book publishers capitalize on the market and issue many books dealing with the same subject. As a result, you are likely to see a number of books on the biology and care of the green iguana, for example, since these lizards are being imported in large numbers for pets. The danger is that since much of the material on the lizard is duplicated or of poor quality, you might be seduced by the pretty pictures or attractive layout. Publishers assess the market and predict what sales are likely to be. If they perceive that the market is limited, the book is generally more expensive. So what is the herpetoculturist to do? Evaluate the content by asking whether the material is fresh and original rather than a recombination or repetition of previously published information. Read reviews and the professional literature. Look for books with careful scholarship, quality photographs and figures, and extensive bibliographies. But scholarly books may cost more which leads to the same dilemma . . . is the book worth the higher price?

This monograph on ratsnakes is a specialized book worth having, even at a higher price. It is not a general compilation on snake biology. Since ratsnakes are commonly kept in captivity, there is enough material on husbandry to assist in managing the collection. One of the values here is the quantity and quality of the photographs. It is an impressive feat that the authors were able to include photographs of species rarely seen. In addition, the bibliography is extensive and lists over 2800 references. The figures are exquisitely drawn although it would have been helpful to know which specimen was used for each drawing, i.e., museum numbers or other means of identification should have been included with the drawings and photographs if available. Table 1 (variation in scutellation counts) and Table 2 (number of maxillary teeth) would have been improved if sample sizes were given.

The table of contents incorporates a preface, acknowledgments, and introduction (abbreviations and terminology; materials, methods, and acronyms; and taxonomic remarks). The section entitled "General Species Accounts" includes information on generic synonyms, etymology, common names, taxa not belonging to the genus *Elaphe*, general description of the genus, paleoherpetological aspects, systematic relationships, distribution, natural history, color variation/color mutation, and ratsnakes and man. One could argue that the section on systematic relationships (pp. 35–36) where Schulz creates 12 groups of ratsnakes that share similar features is premature and too speculative. The groupings are based on his own comparative studies and he does point out that his interpretations of these relationships are to be used only as a starting point for a general revision of the genus in the future.

A major portion of this book is devoted to individual accounts for the 40 species of ratsnakes and includes descriptions of all known subspecies. A typical account usually includes the following: synonymy, holotype, type locality, subspecies, description, scutellation, distribution with range maps, natural history, husbandry and breeding, and pertinent literature. These accounts are well developed and complete. There are two appendices: all known vernacular names in 40 languages and a list of preserved specimens examined. An index of scientific names is included.

The pricing of this book is a bit odd as the book entitled *The Venomous Reptiles of Latin America* by Campbell and Lamar is approximately $65 yet comparable in terms of content, quality, number of color photographs and length. Perhaps the increased cost is due to the cost of translation (the book was originally published in German) or limited market, but nonetheless, herpetoculturists should be grateful that the publisher has made this book available in English.

General Comments on Taxonomic Practices

For the herpetoculturist, changes in scientific names may be confusing because some species have had multiple generic names and various spellings applied since their original descriptions. A small Neotropical colubrid snake *Stenorrhina freminvillei* may hold the record for the number of synonyms at 42 (Smith and Smith, 1976:S-A-7). The milk snake *Lampropeltis triangulum* has a similar history (Williams, 1978:7-11). In one stange twist, Captain F. Wall even named an Indian krait (*Bungarus walli*) after himself. Although he was concerned that such a practice might constitute a breach of ethics, he rationalized that his action was justifed since this was the first new snake species discovered by him in over 11 years of arduous collecting! In fact, there may be a perception that taxonomists simply change names capriciously and without merit. But, in fact, practitioners of taxonomy and systematics attempt to recover evolutionary history by examining relationships between taxa. Since taxonomists may disagree as to these relationships, the proper and most rigorous procedure is for an author to use a peer-reviewed journal to 1) present the data which have been accumulated, 2) interpret these data, and 3) justify conclusions based on these data. The advantage of this approach is that it allows everyone interested in systemat-

ics and taxonomy to see the data sets in the beginning, which could and sometimes does lead to differing conclusions. Peer-review journals are the appropriate places for these papers since objective specialists review the data and determine whether the conclusions are justified. This is not the perfect solution since a reviewer's personal bias or agenda might intrude (see Hull [1988] for interesting examples) but it is about the best that can be done under the circumstances.

In this monograph on page 7, the authors have decided to return three genera of ratsnakes (*Gonyosoma*, *Senticolis*, *Bogertophis*) back to the genus *Elaphe*. Their justification is that the genus *Elaphe* requires an overall revision of Old and New World representatives and such a study would elucidate the relationships of the various taxa; naming genera before this comprehensive study has been undertaken is inappropriate. One cannot fault this logic, for any group of organisms would be better known with additional study. But there is a danger of destabilizing scientific nomenclature with this approach. Let's take the two New World genera as examples. The genus *Bogertophis* was created by Dowling and Price (1988) to include two species: the trans-Pecos ratsnake, *B. subocularis*, and the Santa Rosalia ratsnake, *B. rosaliae*. The genus *Senticolis* includes the green ratsnake, *S. triaspis*, with subspecies (Dowling and Fries, 1987). Both of these studies were published in refereed journals and were presumably reviewed by scientific peers. Both genera are widely used in recent publications: e.g., Collins, 1990; Conant and Collins, 1991; Degenhardt et al., 1996; Lee, 1996; Liner, 1994; Price, 1990a, 1990b, 1991; Ramirez-Bautista, 1994. Schulz and his coauthor would have been better served to follow the same path, that is, present their data sets and justifications for sinking these two genera (as well as *Gonyosoma*) in a peer-reviewed journal rather than by using their book as the vehicle for revealing these changes. This is the more conservative and ultimately cleaner approach for dealing with nomenclatural disputes in that it allows an interested party to look at both sides of the argument, while knowing that both studies underwent peer review. Further, this approach would not have limited the scope of the monograph as the title could have been amended by adding "and Related Genera."

Acknowledgments

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Herps in Hollywood: *Komodo*

by John Kostka

After having its release date pushed back several times, the Australian-made *Komodo* has finally hit U.S. shores. But was it worth the wait?

The film begins promisingly with a spectacular panoramic vista of aerial-shot mountains and forests sweeping off into the distance on the ground before us. This fabulous, letterboxed shot dispelled some of my preconceptions that *Komodo* would be an altogether bad film. What followed rekindled some of these fears, though I was left with the feeling that *Komodo* was not as bad a film as it could have been.

Komodo's story begins on a summer's eve on Emerald Isle, a small island off the cost of North Carolina as a batch of mysterious eggs are dumped out of (what seems to be) the truck of an exotic pet smuggler. The eggs are left on this island where, we can only assume, they hatch.

We then move "19 summers later," and meet the teenage Patrick (Kevin Zegers), the boy surely destined to be the film's hero, whose family is one of the few that still vacations on the island. We follow him as he explores the island in pursuit of a small lizard he happens to encounter. Eventually this quirky young fellow becomes lost in a swamp, and, after being assaulted by one of the Komodos (though he miraculously escapes unscathed), manages to find his way home, while stumbling through the brush blindly (lucky young fellow).

While cowering inside his house, he hears the sounds of his parents being killed outside. The film then jumps to an unspecified time in the future (which ends up bringing the narrative to a screeching halt).

It seems that Patrick is suffering from a severe case of post-traumatic stress syndrome, and his new psychiatrist, Victoria, feels that she has the cure for what ails him. Her idea is to take him back to the island, which should awaken his repressed memories and cure him.

Of course, moments after they arrive on the island, Patrick runs off, and after Victoria catches up with the troubled young lad, he takes the time to assure her that her efforts to cure him will be futile (the kid's outlook seems to grow more optimistic by the minute).

After this we meet a pair of oil company "Komodo hunters" (probably not their official job description, for it would look fairly ridiculous on a later resumé, though this is what their position amounts to), whose mission it is to rid the island of the pesky varanids. These two are overseen by a ruthless oil company executive bent on keeping the Komodo crisis under wraps. And, as if this compendium of clichés weren't enough, the oil company owner snarls and spits all of his lines toward them much like the stereotypical villain, and basically flushes all chances of cinematic flair for this picture down the proverbial toilet (though the hammy performance will most certainly have you rolling in the aisles).

Of course, it's not long after these events that the Komodos begin to attack, and the rest of the film turns into a survival of the fittest movie. As the film builds to its climax, Patrick breaks out of his shell, assuming the role of the savage hunter, stripping to the waist and smearing his chest with Komodo blood before waging war against the ornery lizards.

It is during the film's last half hour, that some of the really illogical events begin to happen. In one scene one of the hunters immolates a Komodo by tossing a lit cigar into an oil-slicked pond in which he and the creature are standing. Then, later in the film, the hunter appears again, having managed to somehow survive the conflagration. The saddest part, though, is that unlike the typical action film, where a completely implausible explanation is offered, we don't get any explanation at all, and we are left to believe that the man just conveniently escaped.

In retrospect, I feel that one of the film's biggest problems lies within the characters. Their interaction always ends up seeming forced and utterly unrealistic. This is especially evident during a lot of the scenes when the characters are supposedly connecting with each other. I guess that this could be blamed upon the ill-written screenplay, which includes all of the usual clichés during these scenes. The dialogue during these situations is so unrealistic that it abolishes all possible drama that the scene might have once contained, adding another problem to a film already plagued with troubles.

The special effects in the film are of a wide variety. They range from fairly realistic and competently done to rather unrealistic, especially in the CG (computer generated) Komodo shots, where sometimes, if you look closely, it looks as though the Komodos are not actually walking on the ground, but walking and hovering slightly over it.

A few other things that might tickle your sides are the fact that, like the snake in *Anaconda*, all of the Komodos roar and screech, as well as a scene where one of the Komodos rams its head through the windshield of a truck. The Komodos in this film also seem as though they are a bit too large, though that is the least of the movie's problems.

On the other hand, though, *Komodo* did have a few good shocks and was good for an evening's entertainment (as I put it in the beginning, this could have been worse) if you're looking for mindless thrills and a bunch of laughs that are not supposed to be there along the way. If you're looking for all sum and no substance, *Komodo* might be for you.

By the way, make sure to stick around for the making-of featurette after the film's conclusion. It contains some interesting things, but also a line that got me thinking. One of the effects artists is pleased with the way that the film came out, and he tells us that he hopes that kids coming out of the theater will be asking their parents if Komodo dragons actually exist, and, apparently he imagines that the parents would, with some trepidation, inform them that yes, they do.

This got me to thinking about how a film such as this could serve as negative propaganda toward an already endangered

species. Maybe *Komodo* isn't such harmless fun after all. . . .

Sterling Home Entertainment, 2000, 90 min.

MPAA rating: PG-13 for: violence, brief language

Coming Soon

Undated 2000—*Blood Surfer* [saltwater crocodile]

Jurassic Park III *is currently in the works, though still in pre-production (Sam Neill again stars). There is word that the Japanese films* Gamera 2 & 3 *(depicting the adventures of a super hero turtle) will be released late this year or in 2001, but nothing is set in stone yet.* Crocodile*, the new Tobe (*Texas Chainsaw *[the film's title is spelled this way]* Massacre*) Hooper film, as finished filming, but no release date has been set. And, speaking of* Crocodile*, the film hasn't even been released and its sequel,* Crocodile II: Death Roll *is already in the works (pre-production). And, for those of you that are fans of that old drive-in schlock kind of reptile movie,* Reptilicus 2 *(the original concerned a giant reptile monster generated from a dinosaur limb) is being planned, almost forty years after the release of the original.* Python *seems to be moving steadily along, though there is no guess as to when anything (i.e., filming, release, etc.) will happen as of this writing. Also on the python front, Hans Bauer (you just read a review of one of the films he wrote--the other was* Anaconda*) has finished another script titled* Snake*, which is currently in pre-production. He's thinking of trying one more giant reptile script after this (Mr. Bauer needs to be stopped at all costs!), though so far nothing has been written (thank God!).*
Author's Note: Due to the fact that there was not a "Herps in Hollywood" recently enough, Godzilla 2000 *has never appeared with a release date in the "Coming Soon" section. By the time this article is printed, it will be out (it was released August 18), though you probably saw the horrible trailers during prime time or late night television. A review will appear next issue.*

Bull. Chicago Herp. Soc. 35(9):213-215, 2000

HerPET-POURRI

by Ellin Beltz

Happiness is a warm sun

We hope it was satire, but a recent opinion article stopped me cold when I read, "Ferocious imported lizards have been released [in the Conservatory of Flowers in San Francisco, CA] to end the peaceful lives of innocent Australian and German members of the Blattidae family [cockroaches]. . . . Geckos were set loose to devour defenseless parent and baby cockroaches alike. The justification [was] the [roaches] attendance at a wedding where they partook of the cake and frightened the bride. . . ." The writer points out that the humans held the wedding in prime roach habitat and suggests teaching the geckos to eat tofu. He concludes, "when the conservatory opens after its retrofit, the name could be changed to the San Francisco Conservatory of Flowers, Cockroaches and Tofu-Enhanced Geckos. Thank you for your empathy." I hope he was kidding! [*San Francisco Chronicle*, May 21, 2000, from Bradford Norman]

"Thank you, God; they got it on camera!"

You may have seen some of this on television, but for those of us whose antennae were retracted in July, the story of the giant snake of Wallace, Arkansas, is news. Few of the 51-year-old woman's friends believed her when she told them of seeing a giant snake around the ponds on her property. Her daughter believed her after seeing it slither between the ponds, and across the road to her house. A local camera crew saw nothing but the story went out on the wires on a slow day and pretty soon everyone shows up, including a *National Geographic Explorer* producer and crew. On their last day of filming, they got pictures of what seems to be a 12-foot-long python, but it slipped away from them. [Little Rock *Democrat-Gazette*, July 28, 2000, from Bill Burnett] Stay tuned for the capture.

Sea turtle roundup

• According to the Leesburg, Florida, *Daily Commercial*, turtle watchers in Florida "say they have seen more nests than usual on Florida Panhandle beaches this year. . . . Loggerheads, greens and leatherbacks began laying eggs in May, and the hatchlings will emerge from early August through fall. [August 1, 2000, from Bill Burnett]

• Leatherback turtles may face extinction within a decade unless commercial fishing practices that are killing the reproductive adults are changed, according to an analysis of their recent nesting trends published in the journal *Nature*. At least 1,500 females a year have been caught in long lines and nets used by commercial fishermen. From a 1988 high of 1,367 females nesting at a major site in Costa Rica, researchers expect less than 50 nesting females at the same beach in 2004. [New Orleans, Louisiana, *Times-Picayune*, June 1, 2000, from Ernie Liner]

• Call the Hatchling Hotline for the latest updates on sea turtle hatchling releases at the Padre Island National Seashore. The number is (361) 949-7163. [from Fred Egloff and Ray Boldt]

First chytrid fungus in Europe

Mass mortalities of the common midwife toad, *Alytes obstetricans*, in an alpine area above 5,000 feet in a Spanish national park that has been protected for the past 70 years worry biologists who discovered that many died from Europe's first report of amphibian mortalities due to chytrid fungus. [*FrogLog*, August 2000]

Raiders of the Lost Island Ark

Meanwhile, in Madagascar, a forest with "an incredibly high

number of species [of] frogs . . . probably the highest frog species diversity world wide has been cut down." It used to be that 50 anuran species could be identified in less than three hectares; these represented more than half of Madagascar's amphibian species. Several species were only known from this forest from which all the mature hardwoods have been removed. The remaining bushes, vines, broken trees and detritus will be cleared, according to the inhabitants, to grow rice to feed Madagascar's ever-growing human population. [*FrogLog,* August 2000]

Was it gold plated?

"Investigators have no suspects in [the] theft of a 4-foot Burmese python . . . valued at more than $200 and its aquarium. . . . No forced entry into the home" was observed. [*Northern Virginia Daily*, August 22, 2000, from Bryan McCarty]

The kindest cut

Illinois Governor George Ryan signed a bill in June which states that Illinois schools must "provide dissection substitutes for students who request them," according to the *Chicago Tribune*. Viable (pardon my pun) alternatives include the computer program "Virtual Frog," and various websites which provide three-dimensional dissection information for everything from single-celled organisms to the human brain. Illinois is the fifth state to enact such a law; it follows California, Florida, Pennsylvania and Rhode Island. [August 22, 2000, from Claus Sutor]

Studying rattlers before they're all gone

• Several stories this month show that researchers are trying to understand rattlesnake ecology; perhaps better understanding may help these snakes persist. First comes a tale of radio tracking of timber rattlers in Brown County, Indiana. Workers were seeking "Jake" the snake, who'd had a radio transmitter installed in an effort to study its secretive habits. [*South Bend Tribune*, August 24, 2000, from Garrett Kazmierski]

• The second story shows a picture of a researcher implanting a transmitter into a sedated canebrake rattlesnake in Virginia. This team has been studying canebrakes, a state endangered species. More than 6,000 data points have been collected. [*Northern Virginia Daily*, August 7, 2000, from Bryan McCarty]

• Massasaugas have been found in new places in Ontario, Canada, this year; not much of a range extension, but still significant in light of their decline in other parts of their range. Snake crossing signs have been installed and sighting reports updated as Bruce Peninsula residents participate in the species' recovery efforts. [*Rattlesnake Tales*, Summer 2000, from Bob Johnson]

• "Few other groups are as persecuted as rattlesnakes," wrote Illinois state herpetologist, Chris Phillips. He added "There are accounts of early travelers and farmers encountering 20 or more massasaugas in a single spring day. Within a very few years, however, habitat destruction and outright persecution reduced [them] to a few, widely scattered populations." [*The Chicago Reader*, September 1, 2000]

• Meanwhile at Eldon Hazlett State Park in Carlyle, Illinois, eastern massasaugas are being tracked in an effort to find out the potential impact of building more cabins at this popular tourist resort. Developers continue to work to build a large resort along the shores of man-made Lake Carlyle. [*Chicago Tribune*, July 9, 2000, from Ray Boldt]

• Finally, the *Wildlife Society Bulletin*, Spring 2000, printed an article by Lee Fitzgerald and Charles Painter which stated that "Rattlesnakes are commercial exploited to supply an international trade. . . . Five species are used. . . . The trade is linked to rattlesnake roundups, which are economically important to local communities. We estimated that 15 percent of the . . . diamondback rattlesnakes entering the trade originate from roundups. In the 1990s, probably less than 125,000 rattlesnakes of all species entered the trade yearly. . . . Analysis of the take . . . from 1959 to 1997 at the roundup at Sweetwater, Texas, showed no long-term trends, but was characterized by extreme variability [in] body size . . . and sex through time. . . . Rattlesnake species differ in susceptibility to overexploitation, and research on life-history variation of rattlesnakes should be an important management priority. . . . Monitoring information is needed for the entire trade."

Let's do human skin next year

The big "boom" in python skin sales this year was due to all the tres trendy designers being so innovative and all showing python as the "in skin" for 2000. And all the fashionistas went along; buying everything from python purses to jackets, to little chic dresses to be worn just once and thrown away. Python hunting is still legal, but experts are concerned that hunting them to clothe the so called "intelligentsia" will result in large rodent population expansions which may threaten human grain supplies. In India, one quarter of the grain grown feeds the rats and mice. Less snakes means more rodents and less food for ever growing human societies. The Indonesian Reptile and Amphibian Trade Association represents licensed reptile product tanners and exports. They estimate there are 150,000 snake catchers in Indonesia and that 24,200 other people are engaged in the trade from there to when the skins are shipped over seas. And it's not just U.S. consumers; people in Europe and Asia wear snakeskin, too. [*Chicago Tribune*, July 13, 2000, from Ray Boldt]

Sounds like people

"The enduring [Florida] drought, coupled with the annual mating season, has alligators braving busy streets, eating dogs and even resorting to cannibalism," reports the Leesburg, Florida, *Daily Commercial*. [June 20, 2000, from Bill Burnett]

Gator aid rejected

Various plans to help beleaguered Lake Griffin alligators have been turned down by the Florida Fish and Wildlife Conservation Commission. One proposal would have lowered the lake by up to seven feet to dry it out a bit and perhaps kill some of the algae which have been implicated in the mysterious deaths of hundreds of gators. Other plans proposed using alum to neutralize some of the phosphorus dumped into the lake to test the phosphorus-removing properties of a man-made wetland.

Phosphorus is a nutrient which may be helping the algae take over. Right now, more than 90 percent of Lake Griffin biomass is the toxic algae. [*Orlando Sentinel*, June 22, 2000, from Bill Burnett] By the way, we should all be glad which Florida University invented the popular electrolyte-replacing orange, yellow, blue or white drink now known (after their team) as "Gator-Ade." Had this same drink been invented by their arch rivals, we might all be drinking "Seminole Fluid" instead.

Not a love bite

"An angry alligator took a bite out of a state trooper's car when the officer responded to a report that the reptile was blocking traffic on Interstate 49 [in Ajax, Louisiana]. . . . When [the] trooper . . . arrived at the scene . . . he found a truck driver holding the alligator by the tail and a group of people watching the commotion. . . . [He] ordered the man to release the animal. . . . The alligator turned sharply and attacked . . . the police car. . . . The alligator reportedly left the scene after consuming a softball-sized chunk out of the car's bumper. [Houma, Louisiana, *Courier*, July 14, 2000, from Ernie Liner]

Snakes rescued in India

"Hundreds of snakes, their mouths sewn shut and venom glands punctured, were confiscated by wildlife officials . . . on the eve of a Hindu festival in which starving cobras and rock pythons are forced to drink milk. Some 50,000 snakes die every year during the Nagpanchami festival, when people offer milk, butter, and sweetened rice to starving snakes. . . . Over the past couple of years, teams of wildlife officials . . . have been swooping down on snake charmers who display snakes outside railway stations and temples. . . . Snakes never drink milk, but they are force-fed [at the festival]. They then either have diarrhea or the milk goes into the lungs and they choke to death. . . . The snakes usually die within a few days after the festival and the snake handlers sell their skins on the black market." [August 4, 2000: The Frederick, Maryland *Post* from Mrs. Linda Hauser and the *News-Star* from George M. Patton and Martha Ann Messinger]

But animals die at the zoo

Several animals, including a crocodile and 13 rare tigers died in the Orissa, India, zoo. Various authorities blamed various causes. But an autopsy report mysteriously leaked to the press stated that the tigers died of eating "decomposed and contaminated cow meat." The zoo has 43 more tigers, but these deaths highlight problems of maintaining animals in such an impoverished and densely populated area. The crocodile was tortured to death by his keeper as some form of revenge on the zoo. [Little Rock *Democrat-Gazette*, August 2, 2000, from Bill Burnett]

Picture of the Month

I wish we could reproduce this photo! The picture is of a 250-pound man in a sleeveless tee and shorts, crouched knees wide open to the camera. In each hand he has the tail of a snapping turtle. The caption reads " . . . displays a 40-pound snapping turtle, along with a 12-pounder he recently trapped with his cousin . . . in a pond north of Niles [Michigan. The man] said the larger turtle is at least 60 years old. He said he offered it to [a zoo] and if it doesn't accept it, he intends to release it. [*South Bend Tribune*, August 6, 2000, from Garrett Kazmierski]

Speaking of sticky

Marty Marcus writes from Washington State: "There's been so much stuff in print recently about how geckos hold on to vertical surfaces, but I'm left with a question. . . . When the scanning electron microscope was invented some years back, we started seeing pictures of tokay gecko feet, and the accompanying theory then became that it wasn't suction or "glue" that enabled them to adhere to vertical surfaces but the microscopic setae projecting from the lamellae would hook into microscopic pits in the surfaces. Even ordinary glass has these pits. . . . If the new theory of intermolecular forces is the answer, then whether the surface pits exist or not (like on a telescope mirror) shouldn't affect the gecko's ability to adhere. Nothing I've seen in print so far mentions [this]. . . . If you or anyone can shed some light on this, I'd be much appreciative." Marty is also picking up the mail for the Pacific Northwest Herpetological Society these days in addition to putting out a newsletter and having been president of the Key Peninsula Civic Center last year.

"Bare Necessities" meets "Jake the Snake"

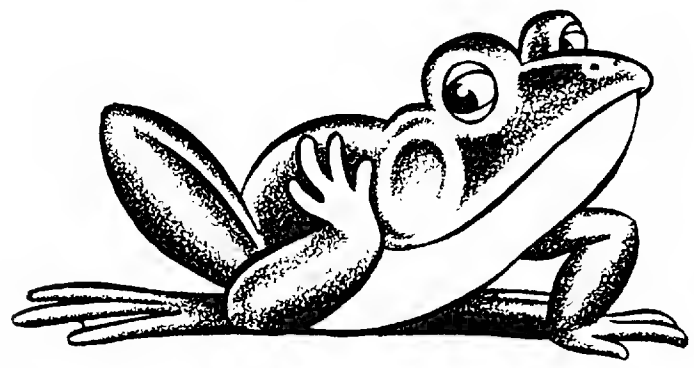
"The Arkansas House of Reptiles has received a temporary reprieve from having to move after several of its snakes recently escaped," reports the Little Rock *Democrat-Gazette*. Three snakes slipped loose and were found in the "Bare Necessities" boutique next door. The snakes were found slithering through the lingerie and sliding around the employee's feet. And while python is "in" this year, it is most definitely "out" for this shop owner. The complaints didn't begin until Bare Necessities moved in; House of Reptiles has been a Hot Springs attraction for many years. How the snakes even got into the lingerie store is questioned by some who note that one snake, very rare, was usually kept in a securely locked container. Food animals, including crickets and frogs have also been found in the boutique. The City had ruled against House of Reptiles, but a Judge issued a stay order, pending a hearing. [July 12, 2000, from Bill Burnett and *Chicago Tribune*, July 30, 2000, from Lori King]

Thanks to everyone who contributed to this month's column and to Bill Burnett, Alan Rigerman, Bob Johnson, G. E. Chow, George M. Patton, Martha Ann Messinger, Wes von Papineau, *MOKO*, Harry Andrews, Ray Boldt, Claus Sutor and Desiree Crawford. You can contribute, too! Send whole pages of news or magazines with your name on each piece to me: Ellin Beltz, 1647 N. Clybourn Avenue, Chicago, IL 60614-5507. Letters and text only (no graphics, bugs or viruses!) to my E-mail <ebeltz@ripco.com>. And drop by my website <www.neiu.edu/~ebeltz> and follow the link to the Chicago Wilderness Amphibian Monitoring volunteer news. Consider joining a frog survey next year! And send all amphibian sightings to me by mail or E-mail. Thanks!

Bull. Chicago Herp. Soc. 35(9):216-217, 2000

The Tympanum

The following exchange of E-mails took place between Kristen Wiley and Ed Stone in regard to Dr. Stone's comments on reptile associated salmonellosis in the July Tympanum.



This letter is in response to the blurb in the Tympanum of the *Bulletin* from July 2000. While it is encouraging to hear of herpers endeavoring to educate the public about herps, and to do it in the safest way possible, I find the method of "sterilizing" the animals quite disturbing. Bacteria, and especially hardy bacteria like RAS, can not totally be killed by using any type of antibiotic, whether it is ingested or used outside the body, as in the case of the Nolvasan rinse. Instead, (and this is how all antibiotics work) the medicine kills most of the bacteria, ending the infection. The bacteria that are not killed survive because they have an immunity to the antibiotic. As bacteria have a short life cycle, new mutations are always occuring, and some of them result in these immunities. Our bodies have enough anitobdies to deal with the remaining few. However, if this cycle is repeated too often, the result is a large number of antibiotic-resistant bacteria. More potent antibiotics are needed to combat these resistant bacteria, and eventually a strain can arise that is resistant to all known medicines. This has allready occured with staff infections in many hospitals.

Washing a snake with one particular antibiotic wash over and over again will only serve in the long run to breed Nolvasan-resistant RAS. A much better solution would be to provide such a wash to the people touching the animals, as they are much less likely to encounter either the wash or the specific bacteria again. As a matter of fact, properly washing the hands after handling the animals is enough, the problem is that very few people actually will do this if out of sight of the animals and their presenters.

This problem has become quite serious in many human diseases, and it seems to me that it would be very irresponsible of us as a community to allow such problems to occur in our animals. Thank you very much for your time. Sincerely, **Kristen Wiley, Slade, KY, kyreptil@mailhost.mis.net**.

Your thoughts on antibiotics are correct; however, Nolvasan is not an antibiotic; rather, it is a disinfectant. Antibiotics and disinfectants are two different classes of compounds that cannot be used interchangably. This use of Nolvasan should not be confused with the proposed controversial use of Gentomycin (an antibiotic) on baby turtles or their eggs to make them acceptable to the marketplace, as was publicized by turtle "farmers" a number of years ago. As a veterinarian, I would certainly agree that that would be an inappropriate use of an antibiotic. Medicinally, Nolvasan is often used as a wound lavage, similar to Betadine, but it is favored for internal use because it is less cytotoxic. It is never used systemically like antibiotics, so the potential development of Nolvasan-resistant strains of bacteria would not likely result in antibiotic-resistant bacteria. Nolvasan is already widely used as a disinfectant to sterilize surfaces such as floors, surgical tables and other surgical equipment in hospitals and veterinary clinics. It is also used as a surgical scrub by surgeons and their assistants. It is also used to disinfect kennels in humane societies, boarding kennels, and other animal compounds. In the dairy industry, it is used as a teat dip to prevent manual transmission of bacteria within a herd, and is also used to disinfect milking machines and other dairy equipment. In fact, the use of Nolvasan as a disinfectant is so widespread that I would be at a loss to remember every different use of it. If Nolvasan-resistant salmonella are created by this extensive use of the product, then it may already be widespread, and one additional occasional use of this product is not likely to make much difference one way or another. If someone were to be infected by Nolvasan-resistant bacteria of any type (and some strains of *Pseudomonas* are naturally resistant to it), then this would not likely have any effect on antibiotic choice for treatment since, as I said earlier, Nolvasan is not an antibiotic and doesn't have a mode of action like any antibiotic I can think of, and would never be used systemically as one. These same statements would apply to any of a wide variety of substances that are available in the marketplace for sanitation/disinfection purposes, and no one would consider removing them from use or availability to prevent the development of "disinfectant-resistant" strains of bacteria. The use of Nolvasan, especially at concentrations stronger that those recommended by the manufacturer, topically on reptiles is consistant with the manufacturers' recommended uses of this product.

Your alternative suggestion that a better solution would be for persons to wash their hands, or rinse them in a provided receptacle of Nolvasan, is of course, undisputable. The problem is one of making sure everyone does so, which is an impossibility. How would one go about making sure every child washes before putting their fingers in their mouth after touching a reptile at an exhibit? Certainly it could be strongly suggested to the parents (which I already do), but I have no authority to mandate it. And of course, in today's litigious society, if someone were to contract RAS that was identified as a strain that was consistent with that occurring in my collection, I could be held legally liable. I have no choice but to continue to disinfect my animals to protect myself as well as the public. **Ed Stone, DVM, aor@itis.com**

Thanks for the reply. I was unaware that Nolvasan was not an antibiotic; I had thought it was in the same class as the "antibiotic" soaps that are for sale for human use. (Are those really antibiotic?) Anyway, I stand corrected.

About getting people to wash . . . you are right, it is just about impossible to make sure everyone does. I think that is why many places have gone to a "no touch" policy, which is really too bad, as how many people have you seen change their opinions on snakes after touching one?

I have two questions for you: First, how is the action of a disinfectant different from an antibiotic? I note that you mentioned the bacteria can still become immune to the disinfectant, and am wondering how this differs. Second, do you still provide Purell or some such hand cleaner at your shows? Thanks again for replying. I am always happy to learn more about all aspects of reptile care and appreciate your taking the time to educate me! Sincerely, **Kristen Wiley**

The active ingredient in Nolvasan is chlorhexidine, a chlorine compound that is corrosive (like an acid) according to the manufacturer. Other chlorine compounds that are used as disinfectants include common household bleach. Alcohol is also used as a disinfectant. Disinfectants, whether chlorine based, or other, physically destroy bacterial cells because they are reactive to the organic molecules that the bacteria are made of, resulting in lysis of the cell wall and destruction of cell proteins and subsequent death of the cell. Physical destruction is a very difficult thing for a bacteria to develop immunity to. These chlorine compounds are usually also destructive to animal cells as well, which is why they cannot be used systemically the way antibiotics are, because they indiscriminately attack any cell, not just the target bacteria. Antibiotics act in a very specific manner against a specific target.

There are many classes of antibiotics and their actions are all different. For example, penicillin compounds interfere with with the cell wall synthesis of gram-positive bacteria. When dividing bacteria cannot make a cell wall, the cell dies. Pennicillins do not interfere with cell membrane synthesis of animal cells because animal cell membranes are made of different substances than bacteria cells.

Aminoglycosides such as Amikacin or Gentomycin interfere with the synthesis of essential bacterial proteins, resulting in death of the bacterial cells. Other classes of antibiotics similarly prevent other essential cell metabolic processes that prokaryotic cells (bacteria) require for their survival. Because eukaryotic cells (animal and plant cells) are made of different compounds or have slightly different biological processes than bacterial cells, antibiotics usually do not negatively affect the survival of these cells.

This interference with essential biological processes occurs when an antibiotic molecule binds to a specific site on the bacteria where the essential process occurs. When bound to the specific site on the bacteria, the antibiotic molecule blocks whatever biological process occurs there. This is different than the physical destruction of the cells that occurs with the use of corrosive disinfectants.

I did not say that bacteria become resistant to disinfectants. I said that *if* resistance occurs, it would not result in resistance to antibiotics. This has not been shown. Bacterial resistance to one type of compound does not usually confer resistance to other types of compounds. I did say that some strains of Pseudomonas are resistant (a better and more accurate word than immunity for what we are discussing) to Nolvasan. This is what the label on the bottle says and I was just quoting it. I have no first-hand knowledge of how this resistance developed. Pseudomonads as a class are very tenacious microorganisms that are resistant to many disinfectants, and most if not all antibiotics. It would be a mistaken assumption to assume their resistance to Nolvasan or other disinfectants is the result of its improper use, since this has not been shown. The development of antibiotic resistance by bacteria of many types has been shown. This occurs when a random mutation of the protein at the antibiotic binding site prevents the antibiotic from binding to the site. If this mutation does not interfere with the biological processes of the bacteria, and the antibiotic does not bind, the bacteria can live and reproduce because the antibiotic cannot function without binding to the cell. This is antibiotic resistance in a nutshell.

I cannot address your questions on over-the-counter "antibiotic soaps" and Purell since I do not use them and am not familiar with their active ingredients. I provide Wash&Dry towelettes that contain benzalkonium chloride (another corrosive chlorine compound) and alcohol (a dessicant) and encourage their use. I believe that this is more effective than soaps or lotions because the act of wiping the hands with towelettes (whether they contain antibacterial chemicals or not) results in the mechanical removal of not only bacteria, but anything else on the skin that promotes the growth and development of bacteria, such as natural body oils, sweat, moisture, food and drink residues (I do a lot of fairs and festivals). I believe this combination approach of sanitizing the animals with Nolvasan along with encouraging personal cleansing with towelettes is the most effective way to prevent RAS if the public wants to touch or handle reptiles. Thank you for your interest and the opportunity to further explain and clarify issues regarding the distinction between antibiotics and disinfectants and their appropriate uses. **Ed Stone, DVM**

Unofficial Minutes of the CHS Board Meeting, August 18, 2000

The meeting was called to order at 7:36 P.M. Board members Karen Bielski and Marcia Rybak were absent.

Officers' Reports

The official minutes of the July 14, 2000, Board of Directors' meeting were read by Emily Forcade. Corrections were made and the minutes were accepted.

The Treasurer's report was read by Gary Fogel and accepted. He explained that all the money earned (less expenses) from the cricket sales by Jenny Vollman at the Gurnee Mills Breeders' Show was donated to the Utila Island Iguana Project. Jack reported that he received the credit owed to us by Zoo Book Sales and he will give it to Gary.

Membership Secretary Mike Dloogatch reported a net gain of one member this month. He has also put together a membership list booklet. It would cost roughly $1,200 to print and mail them to every member. After some discussion about alternate ways to provide this information to the members (E-mail, post on our website) which were not considered feasible, Greg Brim moved that we spend the $1,200 to send the list. The motion was seconded and then discussed. The focus of the discussion was to consider less costly alternatives, especially since it was unclear how many members would actually want a list. Mike said that institutional members often request the lists. Greg withdrew his motion. A second motion was made and seconded to print 100 lists, send each institutional member a list, then distribute the others on request. Joan Moore volunteered to take responsibility for sending the list on request. She suggested that their availability could be publicized in the *Bulletin*. The motion was voted on and carried unanimously.

Vice-President Lori King said that in September there will be no speaker for the general meeting. Instead, we will break up into discussion groups, each moderated by a leader. Each group will have a different focus: e.g., snakes, chelonians, etc. Also, Mike Redmer has agreed to put on a program in 2001 on how to photograph reptiles and amphibians.

Lori has received information from ACRA (The Alliance for the Conservation of Reptiles and Amphibians) that they will be holding an online auction to benefit a rattlesnake roundup reform video project. Two videos will be produced. One will be a short loop made available free of charge to zoos and nature centers. The other will be a longer version that will be made available to broadcast entities, legislators, educators and herp and wildlife groups who wish to inform themselves about the rattlesnake roundup commercialization issue. The proceeds of the auction will be used to fund the production and distribution of these videos. Commercial entities that donate $200 in merchandise will have their banner and link to their website on the ACRA front page for one year. Lori suggested that we raise this at a general meeting and that we send a CHS donation.

Lori was told by Gunther Kohler that some land will be donated by the government for the Utila Island iguana sanctuary, so the project will need to raise only about half as much money as they anticipated.

Publications: Mike Dloogatch and Ron Humbert reported that Chris Lechowicz has agreed to be the webmaster. He already has all the hardware necessary. Kingsnake.com will be the host. Costs are pending. Jack expressed thanks to Marcia Rybak for maintaining a quality website for us.

Standing Committees

Grants: Mike Dloogatch moved that the board allocate $2000 to be used for grants in 2001. The motion was seconded and carried unanimously.

Shows: Jenny Vollman expressed her thanks to Gino Martinez, Letty Martinez, Gary Kostka, John Kostka, Gary Fogel, and Mike Kernan from Timberlane Fisheries for their assistance in the cricket sales at the Gurnee Mills Breeder Show. The floor plan is almost set up for the exhibit during the Herpetological Weekend on September 2–3. Iggy Ihrig has volunteered to provide security on the night of September 2. A question was raised about the Chicago Turtle Club's participation in exhibits conducted by the CHS. Do the CTC members also need to be CHS members? Jack will confirm that our insurance covers them but he believes that anyone we invite is covered. There was some discussion about guidelines for all exhibitors. Such guidelines exist and will be made available to exhibitors. In addition, it is incumbent on the organizer of the exhibit to approach exhibitors when the guidelines are not being followed or if the exhibitor's behavior is unprofessional. Linda Malawy and Jenny Vollman distributed another set of guidelines they wished to propose for discussion. Due to time constraints at the meeting, no discussion was possible. Ron Humbert suggested we form a committee to discuss and formulate proposed guidelines to bring back to the board. Jenny Vollman, Ron Humbert, Linda Malawy and Iggy Ihrig volunteered to be on the committee. Ron also clarified that in the beginning, CTC members were required to be CHS members, but this was changed so that only those who exhibited needed to be members. Jack said he would bring the guidelines to the affiliate arrangements to the next meeting.

Jenny announced that The Rockford Pet Expo is offering booth rental for $300–400. She suggested that this seemed a high cost given that there are few members we are likely to attract from so distant an area.

Claus Sutor announced that the Springbrook Nature Center celebrates its 20th anniversary on August 27. Claus will coordinate the herp exhibit and can be contacted by whoever wishes to exhibit. Ron Humbert said he will attend. Steve Spitzer said that also on August 27, Evanston holds their Community Picnic. Steve usually puts up a table, but is not available to be there this year. If anyone else wishes to do this, it's a rewarding experience since it is very much a family event. Bob Bavirsha mentioned that he has been involved in an educational program with the Chicago Park District in July three days a week. This involves going to different city parks

and talking to children about herps which he brings for display. He noted that this was a great opportunity for inner city children to see herps and recommended it to anyone who had available time.

Adoptions: Rich Crowley said that he was concerned about our legal exposure regarding the keeping of animals we collect through the adoption program, since there was a recent problem between the president of the Animal Welfare League and Animal Control. He felt we needed to move at the level of the state legislature, with perhaps, someone acting as a spokesman for the CHS. Jack stated that this approach is problematic because our charter does not allow us to lobby. Mike Dloogatch was very pessimistic about our ability to change the wording of an existing law like the Dangerous Animals Act. Bob Bavirsha described an incident he experienced with Animal Control during the preparations for ReptileFest when a neighbor complained about the animals on his property. Since he has a good relationship with Animal Control this was easily resolved. He supported the idea that we work to maintain this good relationship which includes being attentive to the idea of being discrete in the display of our animals where they can be seen by the public. Rich announced that Linda Malawy is going to start handling adoptions on a trial basis. Hopefully this can continue during his absence in September.

ReptileFest: Darin Croft reported that he has some ideas about how to increase attendance by targeting specific groups. Several board members suggested that priority be given to finding a venue. Darin thought that the venue was being looked into by others. He will focus on this problem.

Ad Hoc Committees

CAS: Jack has been in discussions with several representatives. He will have more to report in the future.

Nominating 2000: Ron Humbert said that the committee will present its slate at the next board meeting and then at the September general meeting.

Awards: Greg Brim suggested that there be an award given each year for "Youth Contributor" (when an appropriate candidate exists). This would be someone under age 18 who has made significant contributions to the society. This person would be jointly chosen by the President and the awards committee. Everyone thought this was a good idea.

Symposium 2001: Char Haguewood was unable to attend. She sent a memo to the board meeting that included her Venue Comparison Sheet as well as the request for proposal sheet that was faxed out to potential sites. The members present reviewed the six sites which could gave us quotes for the services we require. Char has the authority to sign a contract, and will be available to address any questions, comments or concerns at the general meeting in August. She is also available by E-mail.

Regarding the Kansas City Symposium, Jack noted that the distance to K.C. is 560 miles. People wishing to attend may want to consider flying.

Picnic: Steve Spitzer reported that the picnic was well-enjoyed by everyone who attended. There were games, prizes, nature walks, great food and general camaraderie. Will Forcade was acknowledged as the major executioner of the raccoon piñata.

Old Business

Snakes at the Botanical Garden: Jack referred the request to Rob Carmichael who is very excited about participating in it.

Short: Lisa Yerian will do the Short at the August general meeting. The subject will be "Zoonoses" (illnesses that can be transferred between animals and humans).

Chicago Wilderness Society: Char Haguewood was to contact them. Since she was not present, the subject was put on hold.
Carole Allen Memo: Steve Spitzer sent a letter to the state legislators. He will send a copy to Carole Allen.

Mission Review: Linda Malawy asked about the status of the mission review. Jack plans two meetings, which will probably take place in November. The first will involve the current board and the second will include the new board members.

New Business

Jack reported that he has access to a number of plush animals for a small cost. He suggested bringing them to the general meetings as a thank you for donations made by people who attend. The group approved.

Round Table

Mike Dloogatch said that after the last board meeting, a small group went to a Cuban restaurant and had a very good time. He invited everyone present to attend after today's meeting.

Lori King thanked Jenny Vollman for the great work she did for the Utila Island Iguana Project by organizing the cricket sale at the Gurnee Mills Breeder Show.

Greg Brim requested that the board members-at-large meet after today's meeting to discuss awards.

Claus Sutor said he enjoyed having come to the board meeting.

Steve Spitzer asked for the declarations page for our insurance policy to be faxed to the North Park Nature Center.

The meeting adjourned at 9:37 P.M.

Respectfully submitted by Emily Forcade for
Recording Secretary Karen Bielski

Advertisements

For sale: Frozen rodents now available at the General Meeting starting July 26! Just another good reason to come to the meetings at the Chicago Academy of Sciences Patty Notebaert Nature Museum. Assorted sizes of rats and mice. Call Rich Crowley at (708) 485-5705 for details and pricing.

For sale: rats and mice—pinkies, fuzzies and adults. Quantity discounts. Please send a SASE for pricelist or call Bill Brant, *THE GOURMET RODENT*, 6115 SW 137th Avenue, Archer FL 32618, (352) 495-9024, E-mail: GrmtRodent@aol.com.

For sale: murine-pathogen-free rats and mice available in all sizes, live or frozen: pinkies, fuzzies, crawlers, small, medium and large. Frozen crawler mice in lots of 2000, $.17 each. Also available, full grown hairless mice. FOB shipping point. Master Card accepted. Call (518) 537-2000 between 8:00 A.M. and 5:00 P.M. or write SAS Corporation, 273 Hover Avenue, Germantown NY 12526 for prices and additional information.

For sale: from **The Mouse Factory**, producing superior quality, frozen feeder mice and rats. We feed our colony a nutrtionally balanced diet of rodent chow, formulated especially for us, and four types of natural whole grains and seeds. Mice starting from: pinks, $.17 each; fuzzies, $.24 each; hoppers, $.30 each; weanling, $.42; adult, $.48. Rats: starting with pinks at $.45 each, to XL at $1.80 each. Discount prices available. We accept Visa, MC, Discover or money orders. P.O. Box 85, Alpine TX 79831. Call us **toll-free** at (800) 720-0076 or visit our website: http://www.themousefactory.com.

For sale: from Bayou Rodents, excellent quality feeder mice and rats. Every size available. Pinks starting at $20/100. Orders are shipped by overnight service Monday thru Thursday. We accept Visa, MasterCard and Discover. For more info, contact Rhonda or Peggy, (800) 722-6102.

For sale: **high quality frozen feeders**. Over a decade of production and supply. Seven sizes of mice availabe: small newborn pinks up to jumbo adults. Prices start at $25 per 100. Feeders are separate in the resealable bag, not frozen together. Low shipping rates. Free price list. Kelly Haller, 4236 SE 25th Street, Topeka KS 66605, (913) 234-3358 evenings and weekends.

For sale: Entire collection of CHS publication (new format edition), **best offer** **Also some snakes and some cages for sale**. Moving to Texas and trying to get rid of some of my collection. Call for details, Mike, (708) 484-5238.

For sale: One-year-old captive-born armadillo lizards (*Cordylus cataphractus*), $400 each. Born Oct 1999, these lizards are the ones that roll up into a ball when frightened. They can be very long lived, up to 25 years and are easy to maintain. Gary Fogel, (773) 935-6938 or E-mail: Kordylus@juno.com.

For sale: I've got great Pueblan milksnakes. Three females and two males just hatched in the middle of August and they're available for only $25 each. I also have Sinaloan milksnakes about to hatch, and you can have 'em for only $25 each. Give Rick Milas a call at (217) 359-5630. Everybody needs at least one milksnake!

For sale: Madagascar ground boas, c.b. 7/00 from very bright and colorful parents, unrelated pairs available; one male and one female Madagascar tree boas, green phase, c.b. 6/00; one male and two female black-headed pythons, c.h. 1999. Solid documentation on origin of all animals. Eric Skov, HC60 Box 175, Wells NV 89835, (775) 752-3909 phone, (775) 752-3643 fax.

For sale: Why buy wild-caught royal pythons (*Python regius*) when you can buy healthy captive bred? I have babies available for $40 each, complete with history (hatch date, feeding dates, etc). Also, aberrant California kingsnakes for $25 each. All babies guaranteed feeding and sexed. Call Rich Crowley, (708) 485-5705 for details.

For sale: womas—c.b. babies, "starburst" phase, high-contrast strawberry banding, orange bellies, bright orange heads with supraocular black spots, feeding great on thawed fuzzies, unrelated available, $3,000/pair, lone males, $1250. Also, adult Mexican rosy boas, proven breeders, $100 female, $75 male, or $150/pair; Macklot's pythons yearlings, $75 each; yellow anacondas, c.b. babies, $75 each, $50 each in lots of 10; screaming baby Brazilian rainbows, $100 each. Mark Petros, (847) 854-3259, E-mail: turbovixens1@prodigy.net.

For sale: Send SASE to CRC, P.O. Box 0731, Las Vegas NV 89125-0731 for brochures and list of species available. Limited bookings available for guided tours of herpetological collection sites in Nevada. Call/fax (702) 450-0065. URL http://www.herp.com/crc/ E-mail: crcsafetie@aol.com.

Tours: Adventure tours to Madagascar! Join **Bill Love** seeing and photographing fauna and flora, heavily herp-biased, across the world's least known mini-continent. Maximum fun & photo ops assured on every trip. Contact him at: BLUE CHAMELEON VENTURES, P.O. Box 643, Alva FL 33920. TEL: (941) 728-2390, FAX: (941) 728-3276, E-mail: blove@cyberstreet.com.

Tours: **Road-riding in Costa Rica!** Treat yourself to the trip of a lifetime! Learn about tropical herps, find them, photograph them, see where they live. **Greentracks, Inc.**, offers the best herpetological tours led by internationally acclaimed herpetologists and herpetoculturists. See the Amazon, visit cloud forests, experience the world's greatest rainforest, super sunsets and good company. Call (800) 9-MONKEY.

Wanted: big-headed turtles; mata mata turtles; Mexican giant mud turtles (*Staurotypus triporcatus*); exceptionally large common snappers (45 lbs. & up); large alligator snappers (over 90 lbs.); spectacled caiman from Trinidad, Tobago and Surinam; dwarf caiman; smooth-fronted caiman; albino turtles (except red-eared sliders). Walt Loose, (610) 926-6028, 9:00 A.M. – 1:00 P.M. or after 11:30 P.M. Eastern Time.

Line ads in this publication are run free for CHS members—$2 per line for nonmembers. Any ad may be refused at the discretion of the Editor. Submit ads to: Michael Dloogatch, 6048 N. Lawndale Avenue, Chicago IL 60659, (773) 588-0728 evening telephone, (312) 782-2868 fax, E-mail: <MADadder0@aol.com>.

MOVING??

Please let us know in plenty of time of any change in your mailing address. The *Bulletin of the Chicago Herpetological Society* is sent to our U.S. members by bulk-rate third class mail. This means that the U.S. Post Office will not forward your *Bulletin* with the rest of your mail. This is so even if you make a special request that your magazines be forwarded (such a request only applies to second class mail).

UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will begin at 7:30 P.M., Wednesday, September 27, at the Peggy Notebaert Nature Museum, Cannon Drive and Fullerton Parkway, in Chicago. The featured speaker this month will be **Dr. Robert George Sprackland**, author of *Giant Lizards* and Contributing Editor for *Reptiles* magazine. Dr. Sprackland is a noted authority on monitor lizards and will share with us some of his recent findings on the monitors of the Indo-Australian region.

The October 25 meeting will feature workshops led by local CHS experts, covering various aspects of herpetoculture.

The Chicago Turtle Club

The next meeting of the Chicago Turtle Club will be Sunday, September 24, 1:00 – 3:30 P.M., at the North Park Village Nature Center, 5801 N. Pulaski, in Chicago. This will be the CTC's annual fall turtle show, "Touch a Turtle – Tickle a Tortoise." Meetings are informal; questions, children and animals are welcome. Parking is free. For more info call Lisa Koester, (773) 508-0034, or visit the CTC website: http://www.geocities.com/~chicagoturtle.

NEW MEETING SITE

The regular monthly meetings of the Chicago Herpetological Society now take place at Chicago's newest museum – the **Peggy Notebaert Nature Museum**. This beautiful new building is at Fullerton Parkway and Cannon Drive, directly across Fullerton from the Lincoln Park Zoo. Meeting dates will continue to be the last Wednesday of each month. Meetings start at 7:30 P.M. and last until 9:30 P.M. Parking is free on Cannon Drive. During the summer months the Lincoln Park Zoo lots across Fullerton charge $7. A plethora of CTA buses stop nearby.

DONATIONS TO THE JULY 26 RAFFLE

The following is a listing of those businesses and individuals who generously donated items for our monthly raffle at the July 26 meeting. The donated items are shown in parentheses.

West Indian Iguana Specialist Group (T-shirt); **Pretty Pets** (aquatic turtle food); **Sunshine Mealworms** (cricket gift certificate); **Absorption Corp.** (Carefresh pet bedding); **Tetra** (ReptoMin food stix / Reptovit supplement / herp bag); **Rep-Cal** (bearded dragon food); **ZooMed** (*Repti-Mania* herp book); **Fancy Publications** (*Reptiles* magazine subscription); **Super Pet** (Hanging Gardens cage decor / Floating Island / Rock Pool Cover/ Island Sanctuary/ ceramic dishes); **Hagen** (OrnamentAlls cage decor / Repti-por odor remover / Rept-o-Meter hygrometer); **Karen Simonaitis** (custom herp enclosure); **Dr. Cheryl Roge—Best Friends Animal Hospital** (herp husbandry supplies); **Will Forcade** (herp night light); **Ilene Sievert** (plants); **Lori King** (T-shirt / herp toy); **Jack Schoenfelder—Reptiques** (aquariums); **Rich Crowley—CHS adoptions** (ceramic heating element & hood); **Marcia Rybak** (dino paper & mousepad); **CHS** (book: *Care and Maintenance of Ball Pythons* / iguana food).

CHS MEMBERSHIP LIST AVAILABLE TO ALL MEMBERS UPON REQUEST

A listing of names and addresses of all members of the Chicago Herpetological Society, current as of August 2000, is available to members free of charge upon request. Send your request to Chicago Herpetological Society, 2060 N. Clark Street, Chicago IL 60614, or you may E-mail your request to Joan Moore at Joan.Moore@worldnet.att.net.

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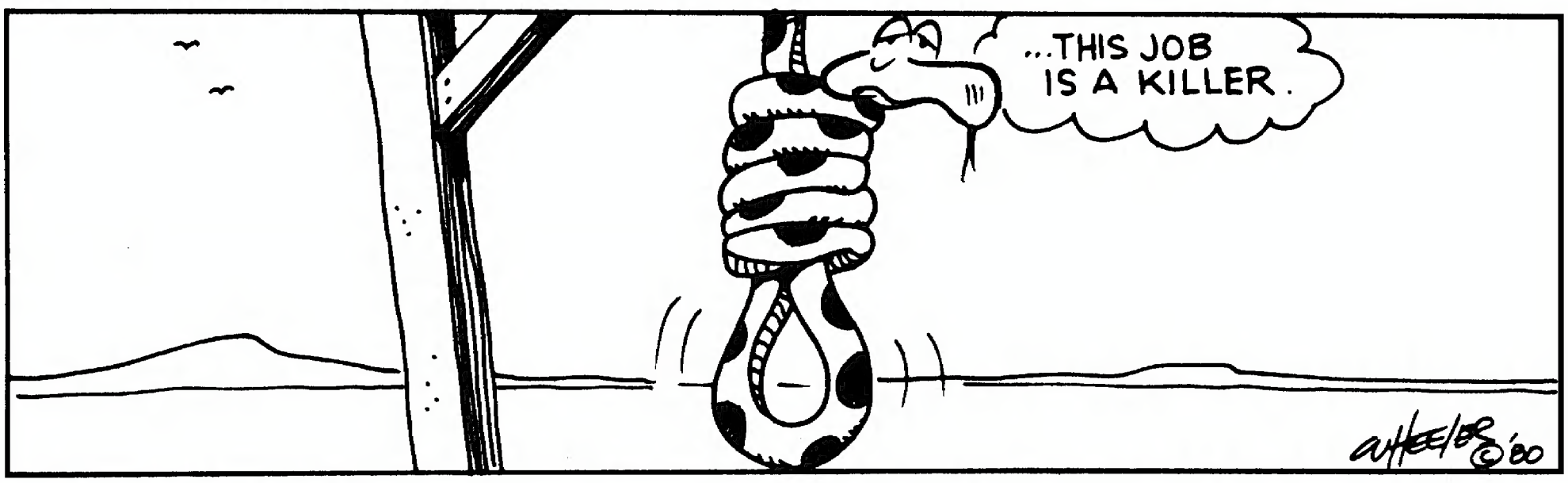

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